

19-7572



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D350-591-121
Job Sheet 196226



Part No: D350-591-121

Job Qty: 2 pcs

Part Name: Heli-Access-Step™ LH - High Gear, Short Step, Float Compatible



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 6/10/19

Job Tracking No:

Due Date: 7/19/19

Created By: Marie Lajeunesse

Type: Stock

Description: SIOP

Note: DWG IIN-D350-591 REV H, D2351-041 REV E IPP Rev:E 02.10.21 Re-format; Incorporated D2351-041 IPP
KJ/RF IPP rev. F 06.02.23 added grinding EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Lead Time	Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier			
110	Large Fab - Steps - 1	2 pcs	7/19/19		0.00	1.36	Large Fab - 1			Lu
							Large Fab - 10			
							Large Fab - 2			
							Large Fab - 3			
							Large Fab - 4			
							Large Fab - 5			
							Large Fab - 6			
							Large Fab - 7			
							Large Fab - 8			
							Large Fab - 9			
							Large Fab - 11 (Various)			
120	Skidtubes - Bend - 2 - B4B	2 pcs	7/19/19		0.38	0.59	Skidtubes - Bend - B4B			TU
122	QC 5	2 pcs	7/19/19		0.00	0.00	QC 5 - 10			
							QC 5 - 12			
							QC 5 - 17			
							QC 5 - 18			
							QC 5 - 19			
							QC 5 - 22			
							QC 5 - 24			
							QC 5 - 3			
							QC 5 - 43			
							QC 5 - 49			
							QC 5 - 51			
							QC 5 - 58			
							QC 5 - 68			
							QC 5 - 9			
							QC 5 - 50			
							QC 5 - 30			
							QC 5 - 40			
140	Large Fab - Steps - 2 - B4B	2	7/19/19		0.00	1.36	Large Fab - 1 - B4B			

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	pcs				Large Fab - 10 - B4B	SLC
					Large Fab - 2 - B4B	
					Large Fab - 3 - B4B	
					Large Fab - 4 - B4B	
					Large Fab - 5 - B4B	
					Large Fab - 6 - B4B	
					Large Fab - 7 - B4B	
					Large Fab - 8 - B4B	
					Large Fab - 9 - B4B	
					Large Fab - 11 - B4B (Various)	
					QC 9 - 10	
150 QC 9	2 pcs	7/19/19	0.00 0.00		QC 9 - 18	DAS 24 9-89 JUL 23 2019
					QC 9 - 24	
					QC 9 - 43	
					QC 9 - 50	
					QC 9 - 9	
					QC 5 - 10	
160 QC 5	2 pcs	7/19/19	0.00 0.00		QC 5 - 12	DAS 24 9-89 JUL 23 2019
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	
170 Handfinish - 1-1 Chemical- B4B	2 pcs	7/19/19	0.00 0.37		Handfinish - 1 - 1 - B4B	JUL 19-7-23
					Handfinish - 1 - 2 - B4B	
					Handfinish - 1 - 3 - B4B	
					Handfinish - 1 - 4 - B4B	
					Handfinish - 1 - 5 - B4B	
					Handfinish - 1 - 6 - B4B	
					Handfinish - 1 - 7 - B4B	
					Handfinish - 1 - 8 - B4B	
					Handfinish - 1 - 9 - B4B	
					Handfinish - 1 - 10 - B4B	
					Handfinish - 1 - 11 - B4B	
					Handfinish - 1 - 12 - B4B	
					Handfinish - 1 - 13 - B4B	
					Handfinish - 1 - 14 - B4B	
					Handfinish - 1 - 15 - B4B	
					Handfinish - 1 - 16 - B4B	
					Handfinish - 1 - 17 - B4B	
					Handfinish - 1 - 18 - B4B	
					Handfinish - 1 - 19 - B4B	
					Handfinish - 1 - 20 - B4B	
					Handfinish - 1 - 21 - B4B	
					Handfinish - 1 - 22 - B4B	
180 QC 7	2 pcs	7/19/19	0.00 0.00		QC 7 - 10	
					QC 7 - 13	
					QC 7 - 14	

				QC 7 - 15	
				QC 7 - 17	
				QC 7 - 18	
				QC 7 - 19	
				QC 7 - 2	
				QC 7 - 28	
				QC 7 - 3	
				QC 7 - 30	
				QC 7 - 34	
				QC 7 - 36	
				QC 7 - 37	
				QC 7 - 41	
				QC 7 - 47	
				QC 7 - 48	
				QC 7 - 51	
				QC 7 - 58	
				QC 7 - 59	
				QC 7 - 60	
				QC 7 - 9	
				QC 7 - 68	
				QC 7 - 50	
				QC 7 - 67	DAS
				QC 7 - 40	24
				QC 7 - 24	9-89
				QC 7 - 43	
					SEP 1 2 2019
190 Large Fab - Steps - 3 - B4B	2 pcs	7/19/19	0.00 1.36	Large Fab - 1 - B4B	
				Large Fab - 10 - B4B	
				Large Fab - 2 - B4B	
				Large Fab - 3 - B4B	DAS
				Large Fab - 4 - B4B	24
				Large Fab - 5 - B4B	9-89
				Large Fab - 6 - B4B	
				Large Fab - 7 - B4B	
				Large Fab - 8 - B4B	
				Large Fab - 9 - B4B	
				Large Fab - 11 - B4B (Various)	
					SEP 1 2 2019
220 QC 10	2 pcs	7/19/19	0.00 0.00	QC 10 - 10	
				QC 10 - 18	
				QC 10 - 24	
				QC 10 - 43	DAS
				QC 10 - 50	43
				QC 10 - 58	9-89
				QC 10 - 9	
230 QC 5	2 pcs	7/19/19	0.00 0.00	QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 43	DAS
				QC 5 - 49	43
				QC 5 - 51	9-89
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	
				QC 5 - 50	

				QC 5 - 30	
				QC 5 - 40	
240 Handfinish - 1-2- Chemical-B4B	2 pcs	7/19/19	0.00 0.37	Handfinish - 1 - 1 - B4B ✓	
				Handfinish - 1 - 2 - B4B	
				Handfinish - 1 - 3 - B4B	SEP 16 2019
				Handfinish - 1 - 4 - B4B	
				Handfinish - 1 - 5 - B4B	
				Handfinish - 1 - 6 - B4B	
				Handfinish - 1 - 7 - B4B	
				Handfinish - 1 - 8 - B4B	
				Handfinish - 1 - 9 - B4B	
				Handfinish - 1 - 10 - B4B	
				Handfinish - 1 - 11 - B4B	
				Handfinish - 1 - 12 - B4B	
				Handfinish - 1 - 13 - B4B	
				Handfinish - 1 - 14 - B4B	
				Handfinish - 1 - 15 - B4B	
				Handfinish - 1 - 16 - B4B	
				Handfinish - 1 - 17 - B4B	
				Handfinish - 1 - 18 - B4B	
				Handfinish - 1 - 19 - B4B	
				Handfinish - 1 - 20 - B4B	
				Handfinish - 1 - 21 - B4B	
				Handfinish - 1 - 22 - B4B	
250 Powdercoat - 1 White Gl(A)-B4B	2 pcs	7/19/19	0.00 0.32	Powdercoat - 1 - B4B	
				Powdercoat - 2 - B4B	
				Powdercoat - 3 - B4B	BRP 9-16
				Powdercoat - 4 - B4B	
260 Handfinish - 3-1- WingWalk-B4B	2 pcs	7/19/19	0.00 0.37	Handfinish - 3 - 1 - B4B	11-14-9-13
				Handfinish - 3 - 2 - B4B	
				Handfinish - 3 - 3 - B4B	
				Handfinish - 3 - 4 - B4B	
				Handfinish - 3 - 5 - B4B	
270 QC 3	2 pcs	7/19/19	0.00 0.00	QC 3 - 10	
				QC 3 - 13	
				QC 3 - 15	
				QC 3 - 17	
				QC 3 - 18	
				QC 3 - 2	
				QC 3 - 28	
				QC 3 - 3	
				QC 3 - 30	
				QC 3 - 34	
				QC 3 - 36	DAS
				QC 3 - 41	81
				QC 3 - 51	9-89
				QC 3 - 58	
				QC 3 - 59	SEP 18 2019
				QC 3 - 68	
				QC 3 - 9	
				QC 3 - 40	
				QC 3 - 19	
				QC 3 - 43	
				QC 3 - 24	
280 Packaging 1-1 - Pick Kit - B4B	2 pcs	7/19/19	0.00 0.00	Packaging 1 - 1 - B4B	
				Packaging 1 - 2 - B4B	
				Packaging 1 - 3 - B4B	
				Packaging 1 - 4 - B4B	
				Packaging 1 - 5 - B4B	

					Packaging 1 - 6 - B4B	
					Packaging 1 - 7 - B4B	
					Packaging 1 - 8 - B4B	
					Packaging 1 - 9 - B4B	
					Packaging 1 - 10 - B4B	
					Packaging 1 - 11 - B4B	
					Packaging 1 - 12 - B4B	
					Packaging 1 - 13 - B4B	
					Packaging 1 - 14 - B4B	
					Packaging 1 - 15 - B4B	
					Packaging 1 - 16 - B4B	
					Packaging 1 - 17 - B4B	
					Packaging 1 - 18 - B4B	
					Packaging 1 - 19 - B4B	
					Packaging 1 - 20 - B4B	
					Packaging 1 - 21 - B4B	
					Packaging 1 - 22 - B4B	
					Packaging 1 - 23 - B4B	
					Packaging 1 - 24 - B4B	
					Packaging 1 - 25 - B4B	
					Packaging 1 - 26 - B4B	
					Packaging 1 - 27 - B4B	
					Packaging 1 - 28 - B4B	
					Packaging 1 - 29 - B4B	
					Packaging 1 - 30 - B4B	
					Packaging 1 - 31 - B4B	
					Packaging 1 - 32 - B4B	
					Packaging 1 - 33 - B4B	
					Packaging 1 - 34 - B4B	
					Packaging 1 - 35 - B4B	
					Packaging 1 - 36 - B4B	
290 QC 4	2 pcs	7/19/19	0.00	0.00	QC 4 - 28	
					QC 4 - 58	
					QC 4 - 69	
					QC 4 - 9	
					QC 4 - 46	
					QC 4 - 68	
					QC 4 - 72	
					QC 4 - 74	
300 Packaging 3-1 - Stock - B4B	2 pcs	7/19/19	0.00	0.00	Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	

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				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
305 DC - 1 - B4B	2	7/19/19	0.00 0.00	DC - 1 - B4B	
	pcs			DC - 2 - B4B	
310 QC 21 - FG	2	7/19/19	0.00 0.00	QC 21 - FG - 21	
	pcs			QC 21 - FG - 70	
				QC 21 - SA - 53	

Part Op 110 - (Fabricate per Drwg) 1-Cut D2244-116 extrusion to 55.32" long as per Dwg D2351 2- Drill holes as per dwg using Descriptions: DT8230.

120 - (CNC Delta 100 Bender) Bend as per Dwg D2351-041 using CNC Bender 1 and Folio FT011. Use Bend Program D2351-041. Use DT8033 jig to make sure bend is good and fits the jig.

122 - (QC5- Inspect part completeness to step on W/O)

140 - (Weld per dwg A/R Aluminum rod Batch: 4138872) 1-Bevel Fwd and Aft end for welding 2-Weld Aft End Bracket per QSI 004 & Dwg D2351 using Welding Jig DT8033 A/RAluminum Rod 3-Do not Grind Flush

150 - (QC9- Inspect visual per QSI004- Fusion Welds)

160 - (QC5- Inspect part completeness to step on W/O)

170 - (Chemical Conversion Coat per QSI005 4.1)

180 - (QC7-Inspect Chemical Conversion Coat)

190 - (Weld per dwg A/R Aluminum rod Batch: 4138872) 1-Rivet Leg Assembly as per Dwg D2351 2-Weld Fwd End Plate per QSI 004 & Dwg D2351 A/RAluminum Rod 3-Grind end plate flush.

220 - (QC10- Inspect visual per QSI004- ground welds)

230 - (QC5- Inspect part completeness to step on W/O)

240 - (Chemical Conversion Coat per QSI005 4.1)

250 - (White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum) START TIME: _____ OVEN TEMPERATURE: _____ FINISH TIME: _____

260 - (Wing Walk as per dwg QSI005 4.4 Batch: _____)

270 - (QC3- Inspect Part Finish)

280 - (Pick Kit)

290 - (QC4- 100% Inspect kits for completeness)

300 - Identify and pack for shipping as per PPP D350-591-121 Location:FG039

305 - (Document Control) Photocopy bluefile and type labels as per PPP D350-591-121 CHG005

310 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2244-116	Step Extrusion	1 pcs (5 ea)	110-Large Fab - Steps - 1	
D2850-1	End Bracket	2 pcs (1 ea)	140-Large Fab - Steps - 2 - B4B	
D2582	Hi-Skid Step Leg Assembly	2 pcs (1 ea)	190-Large Fab - Steps - 3 - B4B	
D2673-34	End Plate	2 pcs (1 ea)	190-Large Fab - Steps - 3 - B4B	
MS20600-AD4W3	Cherry Rivet	32 Ea (16 ea)	190-Large Fab - Steps - 3 - B4B	
AN4-37A	Bolt	4 Ea (2 ea) ✓	280-Packaging 1-1 - Pick Kit - B4B	3194363 ✓
AN4-13A	Bolt	2 Ea (1 ea) ✓	280-Packaging 1-1 - Pick Kit - B4B	3196190 ✓
AN4-16A	Bolt	4 Ea (2 ea) ✓	280-Packaging 1-1 - Pick Kit - B4B	3196064 ✓
D2230-1	Mounting Lug	2 pcs (1 ea) ✓	280-Packaging 1-1 - Pick Kit - B4B	3199732 ✓
D2230-3	Mounting Lug	2 pcs (1 ea) ✓	280-Packaging 1-1 - Pick Kit - B4B	3194078 ✓
D2732-030	Rubber Cushion - 3"	4 pcs (2 ea) ✓	280-Packaging 1-1 - Pick Kit - B4B	3205156 ✓
MS21042L3	Nut	4 Ea (2 ea) ✓	280-Packaging 1-1 - Pick Kit - B4B	3204283 ✓
MS21042L4	Nut	8 Ea (3 ea) ✓	280-Packaging 1-1 - Pick Kit - B4B	3211536 ✓
NAS1149D0363J	Washer	8 Ea (4 ea) ✓	280-Packaging 1-1 - Pick Kit - B4B	3201031 ✓
NAS1149D0463J	Washer	12 Ea (6 ea) ✓	280-Packaging 1-1 - Pick Kit - B4B	3192447 ✓

(04983)

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Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
110-Large Fab - Steps - 1	D2244-116	1	18	0
140-Large Fab - Steps - 2 - B4B	D2850-1	2	2	0
190-Large Fab - Steps - 3 - B4B	D2582	2	3	0
	D2673-34	2	5	0
280-Packaging 1-1 - Pick Kit - B4B	MS20600-AD4W3	32	348	0
	AN3-37A	4	71	0
	AN4-13A	2	600	0
	AN4-16A	4	513	0
	D2230-1	2	190	0
	D2230-3	2	393	0
	D2732-030	4	406	0
	MS21042L3	4	1,770	0
	MS21042L4	6	1,856	0
	NAS1149D0363J	8	1,314	0
	NAS1149D0463J	12	2,942	0
Part Specifications				
Specifications could not be found.				

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5.0 PARTS LIST

Qty -117A	Qty -119	Qty -133	Part Number	Description
X			D350-591-117A	<i>Heli-Access-Step</i> ™, Pre-Flight Step
	X		D350-591-119	<i>Heli-Access-Step</i> ™, Long Step – Low Skid
		X	D350-591-133	<i>Heli-Access-Step</i> ™, Aft Maintenance Step
	1		D2355	STEP ASSEMBLY (LOW-LONG)
		1	D2946-041	STEP ASSEMBLY (MAINTENANCE)
2	2		D2171	CLAMP
2	2		D2182B035	CUSHION
		4	D2230-1	MOUNTING LUG
		4	D2230-3	MOUNTING LUG
4	4		D2274	RADIUS BLOCK
1			D2362-041	SUPPORT BRACKET
	1		D2362-3	SUPPORT BRACKET
		1	D2945	MOUNTING PLATE
1	1		D3595-200-300	CUSHION
		8	D2732-030	CUSHION
	2		AN3-37A	BOLT
		2	AN4-7A	BOLT
		4	AN4-11A	BOLT
		8	AN4-16A	BOLT
	4		AN4-21A	BOLT
4	1		AN4-22A	BOLT
	4		NAS1149D0363J	WASHER (AN960JD10)
4	6	14	NAS1149D0463J	WASHER (AN960JD416)
	2		MS21042L3	NUT
4	5	14	MS21042L4	NUT

Qty -121	Qty -122	Qty -123	Qty -124	Part Number	Description
X				D350-591-121	<i>Heli-Access-Step</i> ™, Short Step – High Skid, LH
	X			D350-591-122	<i>Heli-Access-Step</i> ™, Short Step – High Skid, RH
		X		D350-591-123	<i>Heli-Access-Step</i> ™, Short Step – Low Skid, LH
			X	D350-591-124	<i>Heli-Access-Step</i> ™, Short Step – Low Skid, RH
1				D2351-041	STEP ASSEMBLY (HIGH-SHORT, LH)
	1			D2351-042	STEP ASSEMBLY (HIGH-SHORT, RH)
		1		D2356-041	STEP ASSEMBLY (LOW-SHORT, LH)
			1	D2356-042	STEP ASSEMBLY (LOW-SHORT, RH)
1	1	1	1	D2230-1	MOUNTING LUG
1	1	1	1	D2230-3	MOUNTING LUG
2	2	2	2	D2732-030	CUSHION
2	2	2	2	AN3-37A	BOLT
1	1	1	1	AN4-13A	BOLT
2	2	2	2	AN4-16A	BOLT
4	4	4	4	NAS1149D0363J	WASHER (AN960JD10)
6	6	6	6	NAS1149D0463J	WASHER (AN960JD416)
2	2	2	2	MS21042L3	NUT
3	3	3	3	MS21042L4	NUT

Change Record

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Part Number: D350-591-121

Description: HELI-ACCESS STEP, HIGH SKID, SHORT STEP, LH

[illegible]

Entered: JKDate: JUL 15 2019 Oct 25/19NCR No. 19-7572

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only ☐

Job: <u>196226</u> Part No. <u>D350-591-121</u>		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☒ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date: <u>JUL 15 2019</u>		Sequence #: <u>120</u>		QTY Affected: <u>1</u>		MRB (QSI042) DAS 55 9-89 <u>15 Jul 2019</u>	
Description Work Order Deviation				Disposition		Completed By	
<u>Step twisted in BENDER.</u>				<u>Scrap & DESTROY</u> <u>NO REPLACE</u>		<u>J. [Signature]</u>	
Root Cause Operator ☐ Manufacturing Process ☒ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐				FAULT CATEGORY ☐ Pressure/Forced ☒ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:				QC / QA Coordinator DAS 40 9-89 <u>JUL 15 2019</u>			